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ABSTRACT

This study examined how sustained faculty participation produced substantial increases in external funding for a College of Education while the organizational climate of the college collapsed and faculty morale plummeted. The paper first offers a review of the literature on work motivation that provides a rationale for strategies for increasing external funding. Second, processes instituted by the College to increase external funding are listed including: (1) making increased external funding a clear goal; (2) continuing emphasis on this goal and progress toward it; (3) recognition of investigators for funding successes; (4) client centered grant office operations; (5) establishment of a research council to foster research initiatives; (6) hiring a development officer; and (7) changing all faculty appointments from 12 months to 11 months with no change in annual salary. These processes were analyzed for both expected and unexpected effects and in one case (establishing a Development Officer for the College) a direct monetary effect could be determined. Third, perceptions of principal investigators stratified by the level of funding they amassed are reported. The paper concludes that each of the seven mechanisms paradoxically produced faculty perceptions that were detrimental to faculty morale and the organizational health of the college. (Contains 20 references.)

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The Multiple Effects of Influencing External Funding Productivity

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ABSTRACT

This inquiry was undertaken to understand and explain how sustained faculty participation produced substantial increases in external funding while the organizational climate of the college collapsed. Seven mechanisms were developed and implemented to increase external funding by faculty in the college. The tenets underlying these mechanisms are prominent concepts in the literature on work motivation.

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Fiscal pressure and escalating costs in higher education are changing the roles and expectations of university faculty. Over the past seven years, external funding has become increasingly important for funding public higher education across the nation because state allocations to higher education have decreased by 15 percent (GAO/HEHS,1995). The press to fund programs and provide new services has led to an array of revenue generating processes. These processes have changed the professoriate dramatically in some institutions. This paper presents an account of

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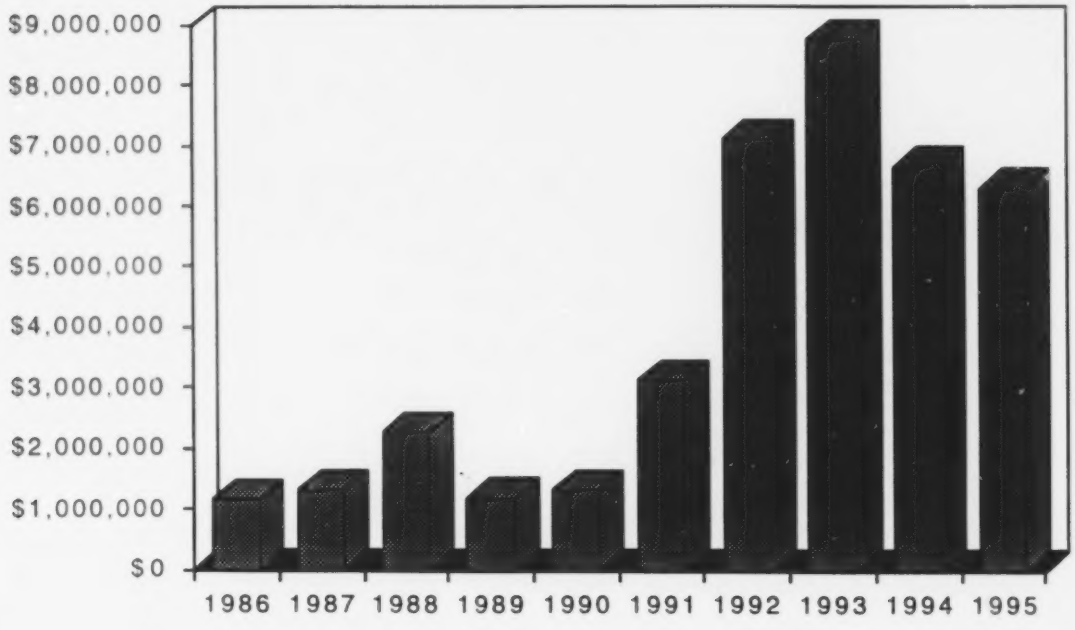
strategies implemented to increase funding from external sources in a college and the resulting changes (some unanticipated) that occurred within the organization.

Table 1. Total External Funding for the College of Education 1986-1995.



Over the past decade, external funding has increased dramatically as evidenced by Table 1 and the following observations.[1]

- The success ratio of funded grants compared to submissions has steadily increased, reaching 52% in 1994.

- Over each of the past five years, between 34% and 42% of the faculty have received funding from external sources, compared with 7% in 1990.

Although faculty, staff and administrators responded remarkably well in meeting the fiscal challenges facing the college, faculty morale plummeted. Given a number of factors including external funding issues the organizational climate became so adverse that the dean of the college did not survive a faculty review and resigned in June 1995. A survey conducted by Dooley (1995) of all of this college's tenured faculty with 58 of 106 responding[2] found that administrative support perceived to be important for grant-seeking activities was given insufficient attention.

Questions about how and why an increase in total funding occurred while faculty morale dropped led to an examination of this set of issues. First, a review of the literature on work motivation is presented that provides a rationale for strategies for increasing external funding. Second, processes that have been instituted were listed as possible mechanisms to increase external funding. These processes were analyzed for both expected and unexpected effects and in one case (establishing a Development Officer for the College) a direct monetary effect could be determined. Third, perceptions of principal investigators in the college stratified by the level of funding they have amassed are reported. The paper concludes with a summary of the relative effects of the strategies on the college's external funding and faculty morale and recommendations for future development.

THEORETICAL CONSTRUCTS

In seeking an explanation for the discrepant events of organizational success with external funding and the demise of that organization's climate and confidence in the leader, a search of the literature on motivation was conducted. Essays by Locke (1991) and Katzell and Thompson (1990) on work motivation were particularly instructive in providing a basis for explaining the discrepant events of the

organization and theoretical perspectives for the mechanisms used to increase revenue from external sources.

Edwin Locke (1991) proposed a framework to link key motivational concepts [needs, values, goals, expectancy/self-efficacy, performance, rewards and satisfaction] into a chronological sequence that is influenced by volition. This sequence begins with needs, that which is required for survival and well-being. Drawing on the work of Binswanger (1991), Locke notes that the conceptual level of consciousness operates volitionally and that needs are fundamental to why people act and thus are essential to gaining an understanding of motivation. Values bridge needs to action and are thought to be what people consider beneficial to their welfare. Examples include achievement theory (McClelland & Winter, 1969) that is general and expectancy theory (Vroom, 1964) that is context specific.

Next in the framework are Goals, that according to Locke, are applications of values to specific situations. It is thought that individuals will perform at higher levels if goals are difficult but attainable, specific and attractive. Goals affect the intensity, duration, and direction of action (Locke, 1991). Locke then describes expectancy and self efficacy as beliefs that affect goal selection that in turn have powerful effects on performance . The ensuing action or performance is thought to be most influenced in a motivational sense by goals and expectancy of the performer, although ability, task knowledge and strategy directly influence the performance.

Rewards can be experienced as a consequence of a performance. Reinforcement theory proponents purport that actions that are rewarded are more likely to be repeated than those that are not (Kerr, 1975). A related issue is whether rewards are distributed equitably, that is, whether the rewards provided for performances are

perceived to be fair across individual performers. Judgments about whether the rewards are distributed fairly are also thought to affect subsequent performance. Finally, from the work of Herzberg, Mausner and Snyderman (1959), Satisfaction has been linked to motivation and is thought to indirectly affect performance (Locke, Cartledge & Koeppel, 1968). Locke (1991) refers to the goal/self-efficacy /performance linkages of the preceding sequence as the motivational hub. This is a generalization about work motivation that states, "...what people do is powerfully (though not solely) influenced by their goals or intents and by their perceived confidence in being able to take the actions in question."[p.296]

Katzell and Thompson (1990) have identified seven key principles for improving work motivation based on their review of the literature on work motivation. The following principles or "motivational imperatives" are closely related to the preceding concepts noted by Locke.

- Ensuring that the motives and values of employees are appropriate to the roles they fill in the organization. Two basic strategies for improving work motivation are to select employees whose motives match the employment situation and providing motive training to employees already in the organization (Katzell & Guzzo, 1983; McClelland & Winter, 1969).
- Making positions attractive, interesting and satisfying to employees. An array of rewards including interesting work, good pay, having sufficient authority to accomplish tasks, friendly and cooperative co-workers and flexible work schedules (Lawler, 1987) are suggested because individuals vary greatly regarding what they prize. It is important to note that the best designs for accomplishing this imperative can be undercut if they are administered inequitably.

- Defining work goals that are clear, challenging, attractive and attainable enhances work motivation as does feedback about the quality of one's work performance (Locke, Cartledge & Koeppel, 1968).
- Providing employees with personal, social and material resources will facilitate their effectiveness in accomplishing their work goals (Katzell & Guzzo, 1983).
- Creating supportive environments for employees through effective interpersonal and group processes will enhance work goal attainment.
- Reinforcing effective performances is necessary to maintain future performances. The essence of this principle is not on the reinforcer, but on the linkage of the reinforcer to the performance.
- Integrating all of these elements into a consistent strategy to enhance work motivation is a worthwhile organizational goal that is labeled quality of worklife, (Lawler, 1985).

Although these are rational principles, implementing them typically has been very difficult. Resistance to social and institutional change linked to vested interests, conflicts of interest, tradition, and threats to power or privilege all mitigate against their use in changing work motivation in organizations.

MECHANISMS TO INCREASE EXTERNAL FUNDING IN THE COLLEGE AND UNANTICIPATED EFFECTS

- **A Clear Goal** was stated in the college's Strategic Plan for increasing external funding six fold over a five year period. The six-fold increase translated into a target of six million dollars per year. This mechanism draws from goal theory that individuals will perform at higher levels if goals are difficult but attainable, specific and attractive (Locke, 1991). The six million dollar level of external funding was

attained in two years, resulting in increasing the goal to a nine-fold increase. The down side of this mechanism was that faculty concerns were expressed that so much emphasis was placed on external funding that curricular programs and scholarship were being undervalued or ignored (College of Education Research Council Meeting Minutes April 2, 1992; May 11, 1992; July 21, 1992; September 29, 1992).

- **Continued emphasis** was placed on this goal and progress toward attaining it occurred by the college administration. This mechanism also draws from goal theory in that feedback on goal attainment is necessary to maintain the motivational force of the goal (Locke, Cartledge & Koeppel, 1968). The dean placed a premium on increasing external funding in college-wide faculty meetings and in monthly meetings with department heads. Concerted efforts occurred to communicate how funds obtained from external resources benefited the college and addressed the program goals in the college's strategic plan. In addition, external funding advances were reported to university administrators when strategic plan progress reports occurred and served as the primary justification for additional space being allocated to the college. However, criticism of the goal intensified among some faculty as emphasis on the goal was continued by the dean and associate dean for research. These concerns were recorded in the meeting minutes of the College of Education Research Council (November 24, 1992; June 14, 1993; April 22, 1994; May 24, 1994).

- **Recognition was provided** to principal investigators for funding successes. This mechanism is based on the principle that reinforcing effective performances (that is, clearly linking reinforcers to desired performances) is necessary to maintain future performances. The success of this mechanism rests on the assumption that recognition serves as a reinforcer (Katzell & Thompson, 1990). Strategies for providing frequent and consistent recognition consisted of reporting funded projects

in a monthly college newsletter, providing monthly funding reports listing the principal investigator, project name and duration, funding agency and award amount to department heads and members of a college research council. Also, a formalized annual document, the College of Education External Funding Report (1991, 1992, 1993, 1994) that contained the preceding award information was distributed widely to college faculty and university administrators. In addition, personal letters of congratulations were sent annually to all faculty who submitted grant applications during the year.

However, it is thought this concerted effort to recognize successful funding initiatives and active participants in external funding created a sense of disenfranchisement among members of the college whose roles were not associated with external funding activities. It is quite possible that these faculty felt their contributions to the organization were not being recognized, thus their contributions/recognition ratios did not compare well to faculty participating in grant activities and thus felt the recognition system was inequitable or unfair. This phenomenon is discussed by Locke (1991) who indicates it reduces the work motivation of workers who feel they are not being treated equitably. Indirect evidence to support this idea is provided in Dooley's (1995) work that 57 percent of the faculty responding to a survey on factors important to grant-seeking rated recognition in college publications as marginally or not important.

- **Client centered** grant office operations were developed and implemented. The motivational imperative associated with this mechanism is that providing employees with personal, social and material resources do increase their effectiveness in accomplishing work goals (Katzell & Guzzo, 1983). The college's administrative organization was revised to establish an Associate Dean for Research whose primary

responsibility was to increase, enhance and promote external funding activities and an additional bookkeeper was employed to assist with grant management. Initiatives were developed to "serve the client" or principal investigator (e.g., seeking and providing white papers on funding initiatives and Requests For Applications to faculty and staff, convening potential grant writing teams on targeted initiatives, providing faculty with travel funds to meet with funding agency personnel, assisting with the preparation of application budgets, obtaining institutional approval signatures, providing technical writer editing service, preparing copies and mailing proposals to agencies). Additional initiatives were implemented to enhance grant management and to enable the Principal Investigator, as well as the college and department of the Principal Investigator to operate efficiently and effectively once the grant was funded (e.g., providing bridge funding to initiate and/or continue project, establishing algorithms for applying salary savings from grants/contracts to administrative units, providing assistance in completing fiscal and compliance documents and providing half of administrative overhead return to the principal investigator). In spite of these activities and functions, Dooley (1995) reported that 54% of the respondents to this survey felt that administrative support was rarely or never provided for proposal preparation. He posited that although a majority of those responding felt that technical assistance was very important for preparing proposals they simply did not take advantage of the services offered to them.

- **The Research Council** for the college was established to foster research initiatives and provide counsel on issues affecting principal investigators. The motivational imperative associated with this mechanism is that creating supportive environments for employees through effective group processes and shared governance will enhance work goal attainment (Katzell & Thompson, 1990). The Council, made up of active principal investigators and representatives from each

department, meets monthly to discuss issues related to funded and non-funded research by faculty. The Research Council has served as a sounding board and initiator for policy development related to proposal development (e.g., instituting computer on-line searches for federal Request-For-Applications, providing travel funds for faculty to visit funding agencies, establishing an editing service by a technical writer, providing support for gaining institutional approval and actual mailing of proposals), grant management (e.g., distributing policies related to fiscal management of grants/contracts to principal investigators, assisting with development of subcontracts related to grant, providing bridge-funding for timely grant start-up, developing a salary savings return policy from grants/contracts to departments and college) and providing incentives, recognition and support to faculty for research (e.g., establishing the Research Scholars Program, administering the college's "Seed Grant" program, establishing the Research Enhancement Support for faculty, providing support for Research Scholar seminars). According to a faculty survey, all of these issues are considered to be important to grant-seeking activities (Dooley, 1995).

- **A development officer** was hired for the college by the Development Foundation [an organization that is associated with but not administered by the university]. The motivational imperative associated with this mechanism is ensuring that the motives and values of the employee are appropriate to the roles this individual fills in the organization (McClelland & Winter, 1969). This individual has been directly responsible for the college's success with foundations and individual donors (over 8.7 million dollars in five years). Through his tireless efforts of identifying potential donors, matching the scholarly and research interests of faculty with the work supported by foundations, making direct contacts and personally visiting with the directors of foundations, sharing executive summaries of faculty

projects and establishing links between faculty members and these directors, the faculty and college has received substantial awards and gifts. Yet in spite of these continuous efforts on behalf of prospective principal investigators, a survey revealed that 74% of the faculty responding felt that support was rarely or never provided for dealing with prospective sponsors (Dooley, 1995).

- **All faculty appointments** were changed from 12 months to 11 months with no change in annual salary beginning in September 1994. This change in appointments enabled faculty members to "pay themselves" from external sources for an additional month. The motivational imperative associated with this mechanism is to provide rewards as a consequence of a performance (Locke, 1991). During the year following the adoption of this appointment policy, 40 percent of the tenure track faculty (41 individuals) "bought out" their twelfth month thus increasing their annual incomes from their faculty appointments by over nine percent. Although this policy had been discussed with faculty for two years as a desired incentive (College of Education Research Council Minutes July 21, 1992) and approximately seventy percent of the faculty had agreed to participate voluntarily in this program, an unexpected requirement was added by the central administration that all faculty had to participate. This additional requirement was accepted with reservation by the dean, but a maelstrom resulted and the organizational climate of the college plummeted because this decision had been made without sufficient faculty involvement.

PERCEPTIONS OF PRINCIPAL INVESTIGATORS

Determining the impact of particular mechanisms on external funding activities has not specifically been determined with the possible exception of the employment of the development officer. However, **perceptions of faculty who have submitted**

grant proposals during the college's growth in external funding were sought regarding underlying motivational factors that influenced them to participate in grant-seeking processes. Perhaps faculty agree with Bauer (1995), who notes, "The prospect of using someone else's money to do what I've always wanted to do, or meet my organization's needs, was real enough for me to pursue grants. " [p. 37]. Or, possibly they perceived they were influenced by factors in the framework developed by Locke (1991) on work motivation (i.e., needs, values, goals, expectancy/self-efficacy, performance, rewards and satisfaction) and the motivational imperatives posited by Katzell and Thompson (1990).

Drawing on work motivation literature and the mechanisms that have been instituted to increase funding, a non-anonymous questionnaire was prepared. The questionnaire sought a dichotomous response (Yes or No) to whether the following eight factors had influenced their participation in grant-seeking activities [personal satisfaction, recognition, professional responsibility, recruited to seek grants, supported by mentor, high priority college goal, greater professional flexibility, future income enhancement]. This questionnaire was distributed in August 1994 to 78 faculty who had submitted grant proposals over the preceding four years. The questionnaire was distributed again six weeks later to non-respondents. Sixty-five completed questionnaires (83% of the total) were returned by mid-October, 1994.

Table 2. Influences Reported by Principal Investigators for Engaging in Grant Activities stratified by Range of Cummulative Awards Over Four Years (1991-1994)

Range of Awards in $	1M+	500-999K	100-499K	<100K	0	TOTAL
			Related Information			
Number of Principal Investigators	5	6	21	29	41	102
Successful Proposals	96	34	79	49	0	258
Proposals Submitted	125	84	156	89	102	556
			Survey Responses			
Satisfaction	100%	60%	67%	59%	51%	
Recognition	80%	20%	48%	31%	37%	
Recruited	20%	0%	14%	10%	7%	
College Goal	60%	40%	62%	41%	41%	
Professional Flexibility	100%	40%	48%	41%	37%	
Income Enhancement	60%	40%	43%	21%	29%	
Mentored	0%	20%	19%	17%	12%	
Professional Responsibility	60%	80%	67%	59%	46%	

Because the identity of the respondents were known and extensive awards data were available that had been validated for the annual College of Education External Funding Reports, responses were compiled and stratified by the range of cumulative

awards (in dollars). These results are summarized in table 2. Observations and interpretations from these data include:

- Faculty who have been highly successful over four years in obtaining grants/contracts reported they were influenced to submit proposals by nearly all of the listed factors (e.g., satisfaction, recognition, college goal, flexibility, income enhancement, responsibility) except they were not *recruited* to seek funding nor were they *mentored* on how to obtain grants. This finding is consistent with the motivational hub or goal/self-efficacy/performance linkage proposed by Locke (1991).
- Faculty in the upper two award categories are very experienced and industrious, submitting nearly 5 proposals each year across four years. Although not presented directly in the table, these 11 principal investigators accounted for 70 percent of the dollar awards over this period. This finding appears to support the observation of Katzell and Thompson (1990) that people who think that the causes of their performance are stable, internal and intentional are more likely to have more favorable job attitudes and willing to work on challenging tasks.
- *Personal Satisfaction* followed closely by *Professional Flexibility* and *Professional Responsibility* appear to be the greatest influences on faculty to submit grant applications. This finding supports the motivational imperative (Katzell & Thompson, 1990) that positions need to be attractive, interesting and satisfying to employees.
- The perceived influence of the *college goal* for increasing external funding varied from 41% to 62%. This finding provides support that the emphasis placed on this mechanism has influenced faculty to participate in external funding initiatives. Further, these findings are consistent with the idea that goals affect the intensity, duration of effort extended by an employee (Locke, Cartledge & Koeppel, 1968).

- It is encouraging to note that a substantial proportion of faculty who have not received grants still report *personal satisfaction* with engaging in the process of submitting grant applications. Providing direct support and assistance to these individuals in submitting applications apparently has been appreciated. However, providing mentoring and specific targeted assistance to these individuals would likely increase their success potential. This finding is supported by the work of Katzell & Guzzo (1983) who emphasize the value in providing employees with resources to enhance work goal attainment.
- Given the values (0% to 20%) listed under the variable, *recruited to seek external funding*, it is reasonable to conclude the college has not actively recruited new faculty to engage in external funding initiatives. Perhaps this should be another mechanism to enhance external funding volume and one that is recommended by Katzell & Thompson (1990).
- While a few faculty reported being *mentored* in the process of applying for grants, this process has not received sufficient attention. Mentoring strategies need to be systematically developed and implemented across the college as another mechanism to enhance external funding volume. This strategy is also supported by the idea of developing the motives of workers through training (McClelland & Winter, 1969).

SUMMARY AND CONCLUSIONS

This inquiry was undertaken to understand and explain how sustained faculty participation produced substantial increases in external funding while the organizational climate of the college became very adverse. Seven mechanisms were developed and implemented to increase external funding by faculty in the college. The tenets underlying these mechanisms are prominent concepts in the literature on

work motivation. Six of the mechanisms were implemented at or near the beginning of the five year period examined in this inquiry. The change in faculty appointment mechanism was implemented during the fifth year of this period. With the possible exception of the mechanism of establishing a research council to increase shared governance, each mechanism produced faculty perceptions that were detrimental to faculty morale and the organizational health of the college.

While faculty participation and funding increased with the implementation of the mechanisms that are supported by the literature on work motivation, other dynamics among faculty were occurring that signaled unrest for the college administration. The concerns and uncomfortable sense of the faculty for increasing external funding were captured by Dooley (1995) when he surveyed the faculty regarding barriers and inducements to grant related activity in 1993.

Finally a survey was conducted to determine whether the implemented mechanisms had influenced faculty who had submitted grant proposals during the college's growth in external funding to participate in grant-seeking processes. Perceptions of principal investigators were noted that support four of the motivational imperatives posited by Katzell and Thompson (1990) and four of the mechanisms implemented to increase external funding.

In conclusion, a paradox occurred where the mechanisms designed to increase the level of faculty participation and the amount of external funding were perceived as positively influencing principal investigators, while the organizational climate eroded. Perhaps the mechanisms were sound, but the implementation of the mechanisms may have been pursued too vigorously. For all but one of the mechanisms, faculty concerns were voiced about the impact of the mechanisms on

the well-being of the organization. The college administration buoyed by the realization that the fiscal goals of the organization were being attained, did not sufficiently heed faculty concerns. In retrospect, too much, too soon with too much emphasis may have caused the paradox. Increased participation among faculty with external funding initiatives has been sustained, but it is possible this outcome could have been achieved without the corresponding costs to the college's climate.

Notes:

[1]For the first six months of the 1996 reporting period, external funding totaled $8.4M dollars.

[2]Dooley states in the paper that follow-up contacts with non-respondents indicated that systematic non-response was not a factor in his investigation.

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